

AMENDMENTS TO THE DRAWINGS

Attached are four replacement drawing sheets showing the changes made to Figs. 2-5 for review and approval by the Examiner.

Attachments: 4 Replacement Sheets

REMARKS

I. Status of the Claims and the Rejections

The drawings were objected to for alleged informalities, including missing elements recited in the claims. Applicants have amended the drawings to show the first source and the second source of heated air in Figures 2-5. Applicants also respectfully submit that the operating status detecting arrangement of claim 30 was in fact shown in the original drawings as controller 174, but applicants have amended claim 30 to more clearly recite the controller. In view of each of these amendments, applicants respectfully submit that the objections to the drawings are overcome and should be withdrawn.

Applicants have amended the Abstract to remove legal phraseology and reference numbers. Applicants have also amended the specification to be consistent with the amended drawings, and to clarify grammatical errors resulting from the translation of the original application. Applicants respectfully request that these amendments be acknowledged in the next action.

Claims 22, 23, 26-31 and 33-42 were objected to for alleged informalities in antecedent basis. Furthermore, claims 22, 23, 26-31 and 33-42 were rejected for alleged indefiniteness under 35 U.S.C. § 112, second paragraph. More particularly, each of the claims was rejected for alleged lack of antecedent basis for certain elements and also for allegedly unclear or narrative claim recitations. Applicants have amended claims 22, 23, 27, 29-31, 33-37 and 39-42 to provide proper antecedent basis for each element recited and also to reformulate the claims in conformance with current U.S. practice. Applicants respectfully request that the objections and the Section 112, second paragraph rejections of claims 22, 23, 27, 29-31, 33-37 and 39-42 be withdrawn.

Substantively, claims 22, 23, 26-31 and 33-42 were rejected for alleged lack of novelty under 35 U.S.C. § 102 based on The Garrett Corporation GB Patent No. 1,383,705 ("GB '705"). Applicants respectfully traverse these rejections. However, applicants have amended independent claims 22 and 34 to further clarify the subject matter regarded as patentable. Applicants have also amended claims 23, 27, 29-31, 33, 35-37 and 39-42, and canceled claims 24-26, 28, 32 and 38 in this response. In view of these amendments and the following remarks, applicants respectfully request reconsideration and allowance.

II. Claims 22, 23, 27, 29-31, 33-37 and 39-42 are Novel

A. The Claims

Independent claim 22 recites a device for temperature control in an aircraft cabin including a first temperature area. The device includes a first supply control arrangement including an air intake connected to a first source of heated air, an air outlet connected to the first temperature area, an air duct connected to the air intake and air outlet, and a valve arrangement disposed proximate to the air outlet. The valve arrangement operates to control a flow rate of heated air in the air duct based solely on a specified first temperature for the first temperature area. In this regard, the first supply control arrangement is a temperature-based control. The device further includes a first pressure control arrangement that controls the supply of heated air by controlling a pressure of heated air in the air duct based on a detected pressure in the air duct and the specified first temperature. The first pressure control arrangement is therefore a pressure-based control, and claim 22 requires that the first pressure control arrangement only operates when the valve arrangement is not functional.

Claims 23, 27, 29-31 and 33 depend from claim 22 and recite additional features of the device. For example, claim 30 requires a controller connected to the first supply control arrangement for detecting a non-functional operating status of the valve arrangement.

Independent claim 34 recites a method for controlling temperature in an aircraft cabin having a first temperature area and an air duct. The method includes controlling a supply of heated air from a first source of heated air through the air duct and into the first temperature area with a valve arrangement operating to control a flow rate of heated air into the first temperature area based solely on a specified first temperature for the first temperature area. The method also includes controlling the supply of heated air into the first temperature area based on a detected pressure of heated air in the air duct and the specified first temperature, when the valve arrangement is not functional.

Claims 35-37 and 39-42 depend from claim 34 and recite additional features of the method. In this regard, claim 40 further requires monitoring the valve arrangement with a controller configured to detect a non-functional valve arrangement.

B. The Deficiencies of the Cited Prior Art

The Office Action states that GB '705 discloses every element of independent claims 22 and 34. Applicants disagree. GB '705 is directed to an aircraft air conditioning system including an environmental control system and an auxiliary power unit. As shown in Figure 1 of GB '705, the auxiliary power unit (APU) provides hot bleed air for heat exchangers in three air conditioning packs of the environmental control system (ECS). The environmental control system then supplies conditioned air to five temperature control zones (I-V). GB '705 teaches that "the temperature of the conditioned air supply to the cabin zones is controlled by...an electronic refrigeration pack controller which maintains a specific conditioned air temperature

determined by signals received from cabin zone temperature controllers." Page 2, lines 55-67.

To this end, the electronic refrigeration pack controller is a temperature-based control.

By contrast, claims 22 and 34 of the current application require two alternative types of control. The first supply control arrangement operates to control a flow rate of heated air through an air duct and to be delivered to a first temperature area in an aircraft cabin based on temperature, while the first pressure control arrangement operates to control a pressure of heated air in the air duct. The first pressure control arrangement takes over the control of the supply of heated air into the first temperature area when the first supply control arrangement is not functional. GB '705 fails to teach two different modes of controlling an air conditioning system, let alone a specific pressure-based control.

The Office Action states that GB '705 discloses a pressure detecting arrangement and control. However, the only pressure detection disclosed in GB '705 pertains to detecting a pressure drop across a screen in a turbine discharge duct of the refrigeration unit (i.e., in the heat exchanger) to determine if ice is forming on the screen. If ice formation is detected, bleed air is directed to "an anti-ice muff around the turbine discharge duct" to thereby dispel the ice on the screen. Page 2, lines 48-54. Thus, the pressure detection only pertains to a separate deicing muff around a screen in the heat exchanger and is completely unrelated to controlling the supply of heated air to the cabin. GB '705 is therefore deficient with respect to claims 22 and 34.

For at least these reasons, independent claims 22 and 34 are allowable over GB '705. Each of claims 23, 27, 29-31, 33, 35-37 and 39-42 depends from one of claims 22 and 34 and recites unique combinations of features also not disclosed by GB '705. As such, applicants respectfully request that the rejections of claims 22, 23, 27, 29-31, 33-37 and 39-42 be withdrawn.

III. Conclusion

Based on the amendments to the claims and these remarks, applicants respectfully assert that all present claims are in condition for allowance, and respectfully requests an allowance without further delay.

Applicants believe that no fee is due for this filing. But if the USPTO disagrees, please consider this as an authorization to charge Deposit Account 23-3000.

Respectfully submitted,

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